# Iowa Department of Natural Resources
# Title V Operating Permit

## Name of Permitted Facility: John Deere Product Engineering Center
## Facility Location: 6725 Cedar Heights Drive, Cedar Falls, IA 50613
## Air Quality Operating Permit Number: 05-TV-004
## Expiration Date: May 16, 2010

**EIQ Number: 92-5615**
**Facility File Number: 07-01-087**

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**Responsible Official**
**Name: Dr. Klaus Hoehn**
**Title: Director of World Wide Tractor**
**Mailing Address: 6725 Cedar Heights Drive, Cedar Falls, IA 50613**
**Phone #: (319) 292-8901**

**Permit Contact Person for the Facility**
**Name: Catherine Halverson**
**Title: Plant Environmental Engineer**
**Mailing Address: P.O. Box 8000, Waterloo, IA 50704**
**Phone #: (319) 292-5207**

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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit. Two Title V Permits are being issued for the John Deere Product Engineering Center and the John Deere Engine Works (which are considered one stationary source). This permit is for the John Deere Product Engineering Center. The Title V permit for the John Deere Engine Works was issued on December 7, 2004 (Permit No. 04-TV-018).

**For the Director of the Department of Natural Resources**

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Douglas A. Campbell, Supervisor of Air Operating Permits Section Date

# Table of Contents

**I. Facility Description and Equipment List** ..... 4

**II. Plant - Wide Conditions** ..... 9

**III. Emission Point Specific Conditions** ..... 12

**IV. General Conditions** ..... 47

G1. Duty to Comply
G2. Permit Expiration
G3. Certification Requirement for Title V Related Documents
G4. Annual Compliance Certification
G5. Semi-Annual Monitoring Report
G6. Annual Fee
G7. Inspection of Premises, Records, Equipment, Methods and Discharges
G8. Duty to Provide Information
G9. General Maintenance and Repair Duties
G10. Recordkeeping Requirements for Compliance Monitoring
G11. Evidence used in establishing that a violation has or is occurring.
G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification
G13. Hazardous Release
G14. Excess Emissions and Excess Emissions Reporting Requirements
G15. Permit Deviation Reporting Requirements
G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations
G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification
G18. Duty to Modify a Title V Permit
G19. Duty to Obtain Construction Permits
G20. Asbestos
G21. Open Burning
G22. Acid Rain (Title IV) Emissions Allowances
G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements
G24. Permit Reopenings
G25. Permit Shield
G26. Severability
G27. Property Rights
G28. Transferability
G29. Disclaimer
G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification
G31. Prevention of Air Pollution Emergency Episodes
G32. Contacts List

**V. Appendix: DNR Air Quality Policy 3-b-08 (Opacity Limits)** ..... 61

# Abbreviations

acfm.....actual cubic feet per minute
BACT.....Best Available Control Technology
CE .....control equipment
CEM.....continuous emission monitor
CFR.....Code of Federal Regulation
$^{o}$F.....degrees Fahrenheit
EP.....emission point
EU .....emission unit
EIQ.....emissions inventory questionnaire
$ft^3$/hr .....cubic foot per hour
gal/hr .....gallons per hour
gr./dscf .....grains per dry standard cubic foot
gr./100 cf.....grains per one hundred cubic feet
hp.....horsepower
IAC.....Iowa Administrative Code
IDNR.....Iowa Department of Natural Resources
MMBTU/hr.....million British Thermal Unit per hour
MMcf/hr.....million cubic feet per hour
MVAC.....motor vehicle air conditioner
NAICS.....North American Industry Classification System
NSPS.....new source performance standard
ppmv .....parts per million by volume
lbs./gal.....pounds per gallon
lb./hr.....pounds per hour
lb./MMBtu .....pounds per million British thermal units
PSD .....Prevention of Significant Deterioration
SCC.....Source Classification Codes
scfm.....standard cubic feet per minute
SIC .....Standard Industrial Classification
tpy .....tons per year
ton/yr.....tons per year
USEPA.....United States Environmental Protection Agency

**Pollutants**

PM.....particulate matter
$PM_{10}$ .....particulate matter ten microns or less in diameter
$SO_2$ .....sulfur dioxide
$NO_x$ .....nitrogen oxides
VOC .....volatile organic compound
CO.....carbon monoxide
HAP.....hazardous air pollutant

# I. Facility Description and Equipment List

Facility Name: John Deere Product Engineering Center
Permit Number: 05-TV-004

Facility Description: Farm Machinery and Equipment (SIC 3523)

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**Equipment List [(1)]**

| Emission Point Number | Emission Unit Number | Emission Unit Description | IDNR Construction Permit Number |
|---|---|---|---|
| **PSD Test Cells (Total 43 Cells, 55 stacks)** | | | |
| 1A06 | 1A06 | Diesel Engine Pump Test Cell | 04-A-719-P |
| 1AX02 | 1AX02 | Vehicle Test Cell | 04-A-720-P |
| 2A1 | 2A1 | Diesel Engine Test Cell | 04-A-721-P |
| 2A2 | 2A2 | Diesel Engine Test Cell | 04-A-722-P |
| 2AN-01a | 2AN-01 | Diesel Engine Test Cell | 04-A-723-P |
| 2AN-01b | | | 04-A-724-P |
| 2AN-01c | | | 04-A-725-P |
| 2AN-03a | 2AN-03 | Diesel Engine Test Cell | 04-A-726-P |
| 2AN-03b | | | 04-A-727-P |
| 2AN-03c | | | 04-A-728-P |
| 2AN-08a | 2AN-08 | Diesel Engine Test Cell | 04-A-729-P |
| 2AN-08b | | | 04-A-730-P |
| 2AN-10a | 2AN-10 | Diesel Engine Test Cell | 04-A-731-P |
| 2AN-10b | | | 04-A-732-P |
| 2AN-10c | | | 04-A-733-P |
| 2AN-11 | 2AN-11 | Diesel Engine Test Cell | 04-A-734-P |
| 2AN-13a | 2AN-13 | Diesel Engine Test Cell | 04-A-735-P |
| 2AN-13b | | | 04-A-736-P |
| 2AN-13c | | | 04-A-737-P |
| 2B-01 | 2B-01 | Diesel Engine Test Cell | 04-A-738-P |
| 2CX-02 | 2CX-02 | Axle Test Cell | 04-A-739-P |
| 2CX-04 | 2CX-04 | Axle Test Cell | 04-A-740-P |
| 2CX-05 | 2CX-05 | Axle Test Cell | 04-A-741-P |
| 2CX-06 | 2CX-06 | Axle Test Cell | 04-A-742-P |
| 2CX-07 | 2CX-07 | Axle Test Cell | 04-A-743-P |
| 2CX-08 | 2CX-08 | Axle Test Cell | 04-A-744-P |
| 2CX-10 | 2CX-10 | Axle Test Cell | 04-A-745-P |
| 2EW-01 | 2EW-01 | Diesel Engine Test Cell | 04-A-746-P |
| 2EW-02 | 2EW-02 | Diesel Engine Test Cell | 04-A-747-P |
| 2EW-03 | 2EW-03 | Diesel Engine Test Cell | 04-A-748-P |

## Equipment List [(1)]
## (continued)

| Emission Point Number | Emission Unit Number | Emission Unit Description | IDNR Construction Permit Number |
|---|---|---|---|
| 2EW-04 | 2EW-04 | Diesel Engine Test Cell | 04-A-749-P |
| 2EW-05 | 2EW-05 | Diesel Engine Test Cell | 04-A-750-P |
| 2EW-06 | 2EW-06 | Diesel Engine Test Cell | 04-A-751-P |
| 2EW-07 | 2EW-07 | Diesel Engine Test Cell | 04-A-752-P |
| 2EW-08 | 2EW-08 | Diesel Engine Test Cell | 04-A-753-P |
| 2EW-10 | 2EW-10 | Diesel Engine Test Cell | 04-A-754-P |
| 2EW-11 | 2EW-11 | Diesel Engine Test Cell | 04-A-755-P |
| 2EW-12 | 2EW-12 | Diesel Engine Test Cell | 04-A-756-P |
| 2EW-13 | 2EW-13 | Diesel Engine Test Cell | 04-A-757-P |
| 2EW-14 | 2EW-14 | Diesel Engine Test Cell | 04-A-758-P |
| 2EW-15 | 2EW-15 | Diesel Engine Test Cell | 04-A-759-P |
| 2EW-16 | 2EW-16 | Diesel Engine Test Cell | 04-A-760-P |
| 2NX-01a | 2NX-01 | Vehicle Wind Tunnel Test Cell | 04-A-761-P |
| 2NX-01b | | | 04-A-762-P |
| 2NX-01c | | | 04-A-763-P |
| 2NX-10a | 2NX-10 | Vehicle Cold Room Test Cell | 04-A-764-P |
| 2NX-10b | | | 04-A-765-P |
| 2NX-13 | 2NX-13 | Vehicle Test Cell | 04-A-766-P |
| 2NX-15 | 2NX-15 | Gen Set Test Cell | 04-A-767-P |
| 5NB3 | 5NB3 | Transmission Test Cell | 04-A-768-P |
| 5NB4 | 5NB4 | Transmission Test Cell | 04-A-769-P |
| 5NB6 | 5NB6 | Transmission Test Cell | 04-A-770-P |
| 5W1 | 5W1 | Transmission Test Cell | 04-A-771-P |
| 5XS | 5XS | Vehicle Test Cell | 04-A-772-P |
| 5XN | 5XN | Vehicle Test Cell | 04-A-773-P |
| **Non PSD Test Cells (Total 21 Cells, 21 Stacks)** | | | |
| 1AX02(N) | 1AXA02(N) | Vehicle Test Cell | 04-A-774 |
| 2AX-01 | 2AX-01 | Diesel Engine Test Cell | 04-A-775 |
| 2AX-02 | 2AX-02 | Diesel Engine Test Cell | 04-A-776 |
| 2AX-03 | 2AX-03 | Diesel Engine Test Cell | 04-A-777 |
| 2AX-04 | 2AX-04 | Diesel Engine Test Cell | 04-A-778 |
| 2AX-05 | 2AX-05 | Diesel Engine Test Cell | 04-A-779 |
| 2AX-06 | 2AX-06 | Diesel Engine Test Cell | 04-A-780 |
| 2AX-07 | 2AX-07 | Diesel Engine Test Cell | 04-A-781 |
| 2AX-08 | 2AX-08 | Diesel Engine Test Cell | 04-A-782 |
| 2BX | 2BX | Vehicle Sound Room Test Cell | 04-A-783 |
| 2BX-02 | 2BX-02 | Transmission Test Cell | 04-A-784 |
| 2BX-04 | 2BX-04 | Transmission Test Cell | 04-A-785 |
| 2BX-06 | 2BX-06 | Transmission Test Cell | 04-A-786 |

## Equipment List [1]
## (continued)

| Emission Point Number | Emission Unit Number | Emission Unit Description | IDNR Construction Permit Number |
|---|---|---|---|
| 2BX-08 | 2BX-08 | Transmission Test Cell | 04-A-787 |
| 2EA | 2EA | Diesel Engine Test Cell | 04-A-788 |
| 2EB | 2EB | Diesel Engine Test Cell | 04-A-789 |
| 2EC | 2EC | Diesel Engine Test Cell | 04-A-790 |
| 2ED | 2ED | Diesel Engine Test Cell | 04-A-791 |
| 2EE | 2EE | Diesel Engine Test Cell | 04-A-792 |
| 2EW-09 | 2EW-09 | Diesel Engine Test Cell | 04-A-795 |
| 5XC | 5XC | Vehicle Hi-Bay Test Cell | 04-A-793 |
| **Non Permitted Test Cells [2] (Total 26 Cells, 30 Stacks)** | | | |
| 1AX01 | 1AX01 | Vehicle Test Cell | N/A |
| 2A-03 | 2A-03 | Diesel Engine Test Cell | N/A |
| 2A-04 | 2A-04 | Diesel Engine Test Cell | N/A |
| 2A-05 | 2A-05 | Diesel Engine Test Cell | N/A |
| 2A-06 | 2A-06 | Diesel Engine Test Cell | N/A |
| 2A-07 | 2A-07 | Diesel Engine Test Cell | N/A |
| 2A-08 | 2A-08 | Diesel Engine Test Cell | N/A |
| 2A-09 | 2A-09 | Diesel Engine Test Cell | N/A |
| 2A-10 | 2A-10 | Diesel Engine Test Cell | N/A |
| 2B-02 | 2B-02 | Transmission Test Cell | N/A |
| 2B-03 | 2B-03 | Transmission Test Cell | N/A |
| 2B-04 | 2B-04 | Transmission Test Cell | N/A |
| 2B-05 | 2B-05 | Transmission Test Cell | N/A |
| 2C-02 | 2C-02 | Diesel Engine Test Cell | N/A |
| 2C-03 | 2C-03 | Transmission Test Cell | N/A |
| 2C-04 | 2C-04 | Transmission Test Cell | N/A |
| 2C-05 | 2C-05 | Transmission Test Cell | N/A |
| 2C-06 | 2C-06 | Transmission Test Cell | N/A |
| 2C-08 | 2C-08 | Transmission Test Cell | N/A |
| 2N-02 | 2N-02 | Diesel Engine Test Cell | N/A |
| 2N-03 | 2N-03 | Diesel Engine Test Cell | N/A |
| 2N-04 | 2N-04 | Diesel Engine Test Cell | N/A |
| 2N-05 | 2N-05 | Diesel Engine Test Cell | N/A |
| 2N-07 | 2N-07 | Diesel Engine Test Cell | N/A |
| 2N-08a | 2N-08 | Diesel Engine Test Cell | N/A |
| 2N-08b | | | N/A |
| 2N-10a | 2N-10 | Diesel Engine Test Cell | N/A |
| 2N-10b | | | N/A |
| 2N-10c | | | N/A |
| 2N-10d | | | N/A |

**Equipment List [(1)]**
**(continued)**

| Emission Point Number | Emission Unit Number | Emission Unit Description | IDNR Construction Permit Number |
|---|---|---|---|
| 2EWME1 | 2EWME1 | Oil Mist Eliminator | 97-A-790-S2 |
| 2EWME2 | 2EWME2 | Oil Mist Eliminator | 97-A-791-S2 |
| 2NX6 | 2NX6 | Boiler – Wind Tunnel (natural gas) | N/A |
| | 2NX6-FO | Boiler – Wind Tunnel (Fuel Oil) | |
| 3a | 3a | Boiler 15 (Natural Gas) | 91-A-171-S1 |
| | 3a-FO | Boiler 15 (Fuel Oil) | |
| 3b | 3b | Boiler 16 (Natural Gas) | 91-A-172-S2 |
| | 3b-FO | Boiler 16 (Fuel Oil) | |
| 3c | 3c | Boiler 17 (Natural Gas) | 94-A-188-S1 |
| | 3c-FO | Boiler 17 (Fuel Oil) | |
| 5a | 5a | Pattern Shop Power Tools | 04-A-794 |
| 5N | 5N | Paint Booth | 80-A-008 |
| T1 | T1 | Diesel Tank 1 | 99-A-793 |
| T2 | T2 | Diesel Tank 2 | 99-A-794 |
| T3 | T3 | Diesel Tank 3 | 99-A-795 |

[(1)] Equipment enclosed in double borders is grouped in a table in section III - Emission Point-Specific Conditions section.
[(2)] These non-permitted cells were built, modified, reconstructed or altered prior to September 23, 1970 and no construction permits are required at this time.

## Insignificant Activities Equipment List

| Insignificant Emission Unit Number | Insignificant Emission Unit Description |
|---|---|
| 2C | Water Heater (0.075 MMBtu/hr, Natural Gas) |
| 2N-01a | Emergency Generator - Crit. (0.05 MMBtu/hr, Diesel) |
| 2N-01b | Emergency Generator – Plant (240 hp, Diesel) |
| 5d3 | Machine Shop/Office Water Heater (1.17 MMBtu/hr, Natural Gas) |
| 5e | Welding |
| 5NA2a | Steam Boilers (2.52 MMBtu/hr for 2 units, Natural Gas) |
| 5NA2b | Hot Water Heaters (4.2 MMBtu/hr for 3 units, Natural Gas) |
| 12 | Emergency Generator – Office (20 hp, Natural Gas) |
| D1 | Diesel Tank (1000 gallons) |
| D1EG | Diesel Tank for Emergency Generator (500 Gallons) |
| D2 | Diesel Tank (1000 gallons) |
| FuelTankUn | Fuel Tank (Unleaded Gasoline, 1000 gallons) |
| Fugitive | Fugitive Coolants |
| Fugitive | Fugitive Oils, Grease, Lubricants |
| Fugitive | Fugitive Material Usage |

# II. Plant-Wide Conditions

Facility Name: John Deere Product Engineering Center
Permit Number: 05-TV-004

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

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**Permit Duration**

The term of this permit is: Five (5) years
Commencing on: May 17, 2005
Ending on: May 16, 2010

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

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**Emission Limits**
*Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:*

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide ($SO_2$): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter (state enforceable only)[1]:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

[1] Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered state enforceable only.

Particulate Matter (federally enforceable)[2]:
The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.
Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

**Plant-Wide Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

Operating Limits:

1. The sulfur content of No. 1 and No. 2 fuel oil used shall not exceed 0.5% (by weight).
2. The sulfur content of all other fuels used shall not exceed 0.8% (by weight).
3. The total diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) shall not exceed 2,500,000 gallons per year.

[2] Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP.

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The type of fuel and its respective sulfur content (in wt%).
2. During the first twelve (12) months of operation determine the total amount of diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) for each month of operation.
3. After the first twelve (12) months of operation determine the annual amount of diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 04-A-719-P through 04-A-773-P, 04-A-774 through 04-A-793, and 04-A-795.

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**Compliance Plan**

*The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.*

Unless otherwise noted in Section III of this permit, John Deere Product Engineering Center (JDPEC) is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, JDPEC shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

# III. Emission Point-Specific Conditions

Facility Name: John Deere Product Engineering Center
Permit Number: **05-TV-004**

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## Emission Point ID Number: PSD Test Cells

Associated Equipment

**Table PSD Cells - 1**

| EP | EU | EU Description | Raw Material/ Fuel | Rated Capacity |
|---|---|---|---|---|
| 1A06 | 1A06 | Engine Pump Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 1AX02 | 1AX02 | Vehicle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2A1 | 2A1 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2A2 | 2A2 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-01a [1] | 2AN-01 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-01b [1] | | | | |
| 2AN-01c [1] | | | | |
| 2AN-03a [1] | 2AN-03 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-03b [1] | | | | |
| 2AN-03c [1] | | | | |
| 2AN-08a [1] | 2AN-08 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-08b [1] | | | | |
| 2AN-10a [1] | 2AN-10 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-10b [1] | | | | |
| 2AN-10c [1] | | | | |
| 2AN-11 | 2AN-11 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-13a [1] | 2AN-13 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2AN-13b [1] | | | | |
| 2AN-13c [1] | | | | |
| 2B-01 | 2B-01 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-02 | 2CX-02 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-04 | 2CX-04 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-05 | 2CX-05 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-06 | 2CX-06 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-07 | 2CX-07 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-08 | 2CX-08 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2CX-10 | 2CX-10 | Axle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-01 | 2EW-01 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-02 | 2EW-02 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-03 | 2EW-03 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |

**Table PSD Cells - 1 (Continued)**

| EP | EU | EU Description | Raw Material/ Fuel | Rated Capacity |
|---|---|---|---|---|
| 2EW-04 | 2EW-04 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-05 | 2EW-05 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-06 | 2EW-06 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-07 | 2EW-07 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-08 | 2EW-08 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-10 | 2EW-10 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-11 | 2EW-11 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-12 | 2EW-12 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-13 | 2EW-13 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-14 | 2EW-14 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-15 | 2EW-15 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2EW-16 | 2EW-16 | Diesel Engine Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2NX-01a [1] | 2NX-01 | Vehicle Wind Tunnel Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2NX-01b [1] | | | | |
| 2NX-01c [1] | | | | |
| 2NX-10a [1] | 2NX-10 | Vehicle Cold Room Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2NX-10b [1] | | | | |
| 2NX-13 | 2NX-13 | Vehicle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 2NX-15 | 2NX-15 | Gen Set Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 5NB3 | 5NB3 | Transmission Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 5NB4 | 5NB4 | Transmission Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 5NB6 | 5NB6 | Transmission Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 5W1 | 5W1 | Transmission Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 5XS | 5XS | Vehicle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |
| 5XN | 5XN | Vehicle Test Cell | Diesel [2] | 24.5 gal/hr, 1,000 hp |

[1] Only one of the emission points for this unit will be used at a time.
[2] The fuel may also include biodiesel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.

# Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

**Table PSD Cells - 2**

| EP | EU | Opacity | PM (lb/hr) | $PM_{10}$ (lb/hr) | $SO_2$ (lb/MMBtu) | NOx | | CO (lb/hr) | Iowa DNR Construction Permit # |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | lb/hr | lb/MMBtu | | |
| 1A06 | 1A06 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-719-P |
| 1AX02 | 1AX02 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-720-P |
| 2A1 | 2A1 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-721-P |
| 2A2 | 2A2 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-722-P |
| 2AN-01a | 2AN-01 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-723-P |
| 2AN-01b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-724-P |
| 2AN-01c | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-725-P |
| 2AN-03a | 2AN-03 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-726-P |
| 2AN-03b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-727-P |
| 2AN-03c | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-728-P |
| 2AN-08a | 2AN-08 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-729-P |
| 2AN-08b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-730-P |
| 2AN-10a | 2AN-10 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-731-P |
| 2AN-10b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-732-P |
| 2AN-10c | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-733-P |
| 2AN-11 | 2AN-11 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-734-P |
| 2AN-13a | 2AN-13 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-735-P |
| 2AN-13b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-736-P |
| 2AN-13c | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-737-P |
| 2B-01 | 2B-01 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-738-P |
| 2CX-02 | 2CX-02 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-739-P |
| 2CX-04 | 2CX-04 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-740-P |
| 2CX-05 | 2CX-05 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-741-P |
| 2CX-06 | 2CX-06 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-742-P |
| 2CX-07 | 2CX-07 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-743-P |
| 2CX-08 | 2CX-08 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-744-P |
| 2CX-10 | 2CX-10 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-745-P |
| 2EW-01 | 2EW-01 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-746-P |
| 2EW-02 | 2EW-02 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-747-P |
| 2EW-03 | 2EW-03 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-748-P |
| 2EW-04 | 2EW-04 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-749-P |
| 2EW-05 | 2EW-05 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-750-P |
| 2EW-06 | 2EW-06 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-751-P |
| 2EW-07 | 2EW-07 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-752-P |
| 2EW-08 | 2EW-08 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-753-P |

**Table PSD Cells - 2 (Continued)**

| EP | EU | Opacity | PM (lb/hr) | $PM_{10}$ (lb/hr) | $SO_2$ (lb/MMBtu) | NOx | | CO (lb/hr) | Iowa DNR Construction Permit # |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | lb/hr | lb/MMBtu | | |
| 2EW-10 | 2EW-10 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-754-P |
| 2EW-11 | 2EW-11 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-755-P |
| 2EW-12 | 2EW-12 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-756-P |
| 2EW-13 | 2EW-13 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-757-P |
| 2EW-14 | 2EW-14 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-758-P |
| 2EW-15 | 2EW-15 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-759-P |
| 2EW-16 | 2EW-16 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-760-P |
| 2NX-01a | 2NX-01 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-761-P |
| 2NX-01b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-762-P |
| 2NX-01c | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-763-P |
| 2NX-10a | 2NX-10 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-764-P |
| 2NX-10b | | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-765-P |
| 2NX-13 | 2NX-13 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-766-P |
| 2NX-15 | 2NX-15 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-767-P |
| 5NB3 | 5NB3 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-768-P |
| 5NB4 | 5NB4 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-769-P |
| 5NB6 | 5NB6 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-770-P |
| 5W1 | 5W1 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-771-P |
| 5XS | 5XS | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-772-P |
| 5XN | 5XN | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 1.52 (2) | 0.89 (2) | 04-A-773-P |

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
(2) Standard is expressed as the average of 3 runs.

**Table PSD Cells – 3**

| Pollutant | Emission Limit(s) | Authority for Requirement |
|---|---|---|
| Opacity | 40% | 567 IAC 23.3(2)"d" and the Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |
| PM | 0.16 lb/hr | Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |
| $PM_{10}$ | 0.16 lb/hr | Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |
| $SO_2$ | 2.5 lb/MMBtu | 567 IAC 23.3(3)"b" and the Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |
| NOx | 3.73 lb/hr | Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |
| NOx | 1.52 lb/MMBtu | BACT and the Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |
| CO | 0.89 lb/hr | Iowa DNR Construction Permits Referenced in Table PSD Cells - 2. |

**Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

Operating Limits:

1. The units are limited to firing on the following fuels: diesel fuel, biodiesel fuel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.
2. The sulfur content of No. 1 and No. 2 fuel oil used shall not exceed 0.5% (by weight).
3. The sulfur content of all other fuels used shall not exceed 0.8% (by weight).
4. The total diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) shall not exceed 2,500,000 gallons per year.
5. The total diesel fuel used by the PSD test cells (those units listed in Table PSD Cells - 1) shall not exceed 1,450,000 gallons per year.

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The type of fuel and its respective sulfur content (in wt%).
2. During the first twelve (12) months of operation determine the total amount of diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) for each month of operation.
3. After the first twelve (12) months of operation determine the annual amount of diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) on a rolling-12-month basis for each month of operation.
4. During the first twelve (12) months of operation determine the total amount of diesel fuel used by the PSD test cells (those units listed in Table PSD Cells - 1) for each month of operation.

5. After the first twelve (12) months of operation determine the annual amount of diesel fuel used by the PSD test cells (those units listed in Table PSD Cells - 1) on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 04-A-719-P through 04-A-773-P

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

**Table PSD Cells – 4**

| | | | Stack Characteristics | | | | |
|---|---|---|---|---|---|---|---|
| **EP** | **EU** | **Construction Permit #** | **Stack Height (feet, above ground)** | **Discharge Style** | **Stack Opening (inches, dia.)** | **Exhaust Temp. (°F)** | **Exhaust Flowrate (scfm)** |
| 1A06 | 1A06 | 04-A-719-P | 26.3 | Unobstructed Vertical | 6 | 655 | 950 |
| 1AX02 | 1AX02 | 04-A-720-P | 33 | Unobstructed Vertical | 36.6 | 655 | 950 |
| 2A1 | 2A1 | 04-A-721-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2A2 | 2A2 | 04-A-722-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AN-01a | 2AN-01 | 04-A-723-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AN-01b | | 04-A-724-P | 33 | Unobstructed Vertical | 8 | 655 | 950 |
| 2AN-01c | | 04-A-725-P | 33 | Unobstructed Vertical | 18 | 655 | 950 |
| 2AN-03a | 2AN-03 | 04-A-726-P | 33 | Unobstructed Vertical | 8 | 655 | 950 |
| 2AN-03b | | 04-A-727-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AN-03c | | 04-A-728-P | 33 | Unobstructed Vertical | 18 | 655 | 950 |
| 2AN-08a | 2AN-08 | 04-A-729-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AN-08b | | 04-A-730-P | 33 | Unobstructed Vertical | 10 | 655 | 950 |
| 2AN-10a | 2AN-10 | 04-A-731-P | 33 | Unobstructed Vertical | 8 | 655 | 950 |
| 2AN-10b | | 04-A-732-P | 33 | Unobstructed Vertical | 18 | 655 | 950 |
| 2AN-10c | | 04-A-733-P | 33 | Unobstructed Vertical | 18 | 655 | 950 |
| 2AN-11 | 2AN-11 | 04-A-734-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AN-13a | 2AN-13 | 04-A-735-P | 33 | Unobstructed Vertical | 20 | 655 | 950 |
| 2AN-13b | | 04-A-736-P | 33 | Unobstructed Vertical | 20 | 655 | 950 |
| 2AN-13c | | 04-A-737-P | 33 | Unobstructed Vertical | 20 | 655 | 950 |
| 2B-01 | 2B-01 | 04-A-738-P | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2CX-02 | 2CX-02 | 04-A-739-P | 31.8 | Unobstructed Vertical | 5 | 655 | 950 |
| 2CX-04 | 2CX-04 | 04-A-740-P | 31 | Unobstructed Vertical | 5 | 655 | 950 |
| 2CX-05 | 2CX-05 | 04-A-741-P | 32 | Unobstructed Vertical | 6 | 655 | 950 |
| 2CX-06 | 2CX-06 | 04-A-742-P | 32 | Unobstructed Vertical | 5 | 655 | 950 |
| 2CX-07 | 2CX-07 | 04-A-743-P | 32 | Unobstructed Vertical | 5 | 655 | 950 |
| 2CX-08 | 2CX-08 | 04-A-744-P | 32 | Unobstructed Vertical | 6 | 655 | 950 |
| 2CX-10 | 2CX-10 | 04-A-745-P | 32 | Unobstructed Vertical | 5 | 655 | 950 |
| 2EW-01 | 2EW-01 | 04-A-746-P | 28 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-02 | 2EW-02 | 04-A-747-P | 28 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-03 | 2EW-03 | 04-A-748-P | 28 | Unobstructed Vertical | 6 | 655 | 950 |

| Table PSD Cells – 4 (Continued) | | | Stack Characteristics | | | | |
|---|---|---|---|---|---|---|---|
| **EP** | **EU** | **Construction Permit #** | **Stack Height (feet, above ground)** | **Discharge Style** | **Stack Opening (inches, dia.)** | **Exhaust Temp. ($^{o}$F)** | **Exhaust Flowrate (scfm)** |
| 2EW-04 | 2EW-04 | 04-A-749-P | 26.9 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-05 | 2EW-05 | 04-A-750-P | 26.9 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-06 | 2EW-06 | 04-A-751-P | 26.9 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-07 | 2EW-07 | 04-A-752-P | 28.3 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-08 | 2EW-08 | 04-A-753-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-10 | 2EW-10 | 04-A-754-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-11 | 2EW-11 | 04-A-755-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-12 | 2EW-12 | 04-A-756-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-13 | 2EW-13 | 04-A-757-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-14 | 2EW-14 | 04-A-758-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-15 | 2EW-15 | 04-A-759-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-16 | 2EW-16 | 04-A-760-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2NX-01a | 2NX-01 | 04-A-761-P | 39.75 | Unobstructed Vertical | 14 | 655 | 950 |
| 2NX-01b | | 04-A-762-P | 39.75 | Unobstructed Vertical | 14 | 655 | 950 |
| 2NX-01c | | 04-A-763-P | 39.75 | Unobstructed Vertical | 14 | 655 | 950 |
| 2NX-10a | 2NX-10 | 04-A-764-P | 30 | Unobstructed Vertical | 10 | 655 | 950 |
| 2NX-10b | | 04-A-765-P | 30 | Unobstructed Vertical | 10 | 655 | 950 |
| 2NX-13 | 2NX-13 | 04-A-766-P | 22.5 | Unobstructed Vertical | 28 | 655 | 950 |
| 2NX-15 | 2NX-15 | 04-A-767-P | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 5NB3 | 5NB3 | 04-A-768-P | 41 | Unobstructed Vertical | 12 | 655 | 950 |
| 5NB4 | 5NB4 | 04-A-769-P | 41 | Unobstructed Vertical | 12 | 655 | 950 |
| 5NB6 | 5NB6 | 04-A-770-P | 41 | Unobstructed Vertical | 12 | 655 | 950 |
| 5W1 | 5W1 | 04-A-771-P | 41 | Unobstructed Vertical | 8 | 655 | 950 |
| 5XS | 5XS | 04-A-772-P | 44 | Unobstructed Vertical | 12 | 655 | 950 |
| 5XN | 5XN | 04-A-773-P | 44 | Unobstructed Vertical | 8 | 655 | 950 |

Authority for Requirement: Iowa DNR Construction Permits Referenced in Table PSD Cells - 4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

## Monitoring Requirements

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

### Stack Testing:

| EP | Tests Required | | | | | Demonstrate Compliance By | Required by Iowa DNR Construction Permit |
|---|---|---|---|---|---|---|---|
| 1A06 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-719-P |
| 1AX02 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-720-P |
| 2A1 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-721-P |
| 2A2 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-722-P |
| 2AN-01a | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-723-P |
| 2AN-01b | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-724-P |
| 2AN-01c | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-725-P |
| 2AN-03a | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-726-P |
| 2AN-03b | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-727-P |
| 2AN-03c | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-728-P |
| 2AN-08a | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-729-P |
| 2AN-08b | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-730-P |
| 2AN-10a | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-731-P |
| 2AN-10b | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-732-P |
| 2AN-10c | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-733-P |
| 2AN-11 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-734-P |
| 2AN-13a | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-735-P |
| 2AN-13b | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-736-P |
| 2AN-13c | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-737-P |
| 2B-01 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-738-P |
| 2CX-02 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-739-P |
| 2CX-04 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-740-P |
| 2CX-05 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-741-P |
| 2CX-06 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-742-P |
| 2CX-07 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-743-P |
| 2CX-08 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-744-P |
| 2CX-10 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-745-P |
| 2EW-01 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-746-P |
| 2EW-02 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-747-P |
| 2EW-03 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-748-P |
| 2EW-04 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-749-P |
| 2EW-05 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-750-P |
| 2EW-06 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-751-P |
| 2EW-07 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-752-P |
| 2EW-08 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-753-P |
| 2EW-10 | Opacity (1,2,4) | PM (1,2,5) | $PM_{10}$ (1,2,6) | NOx (1,2,3,7) | CO (1,2,3,8) | (9) | 04-A-754-P |

**Stack Testing: (Continued)**

| EP | Tests Required | | | | | Demonstrate Compliance By | Required by Iowa DNR Construction Permit |
|---|---|---|---|---|---|---|---|
| 2EW-11 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-755-P |
| 2EW-12 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-756-P |
| 2EW-13 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-757-P |
| 2EW-14 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-758-P |
| 2EW-15 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-759-P |
| 2EW-16 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-760-P |
| 2NX-01a | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-761-P |
| 2NX-01b | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-762-P |
| 2NX-01c | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-763-P |
| 2NX-10a | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-764-P |
| 2NX-10b | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-765-P |
| 2NX-13 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-766-P |
| 2NX-15 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-767-P |
| 5NB3 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-768-P |
| 5NB4 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-769-P |
| 5NB6 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-770-P |
| 5W1 | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-771-P |
| 5XS | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-772-P |
| 5XN | Opacity [1,2,4] | PM [1,2,5] | $PM_{10}$ [1,2,6] | NOx [1,2,3,7] | CO [1,2,3,8] | [9] | 04-A-773-P |

[1] This test may be waived by the Department if two (2) of the other test cells in above table demonstrate compliance with the emission standards in this permit.

[2] Testing shall be conducted on one (1) of each of the following range of engines:

- below 200 hp
- 201 hp – 400 hp
- above 400 hp

The operation of each engine shall be in an 8-mode test cycle equivalent to requirements specified in 40 CFR 89. The average of the three (3) engine ranges will constitute one (1) test run.

[3] Testing for NOx and CO shall be conducted simultaneously.

[4] Testing method for opacity is 40 CFR 60, Appendix A, Method 9 with a test run time of one (1) hour.

[5] Testing method for PM is Iowa Compliance Sampling Manual Method 5 with a test run time of one (1) hour.

[6] Testing method for $PM_{10}$ is 40 CFR 51, Appendix M, 201A with 202 with a test run time of two (2) hours.

[7] Testing method for NOx is 40 CFR 60, Appendix A, Method 7E with a test run time of one (1) hour.

[8] Testing method for CO is 40 CFR 60, Appendix A, Method 10 with a test run time of one (1) hour.

(9) Compliance testing must be conducted within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: Non PSD Test Cells

Associated Equipment

**Table Non PSD Cells - 1**

| EP | EU | EU Description | Raw Material/ Fuel | Rated Capacity |
|---|---|---|---|---|
| 1AX02(N) | 1AX02(N) | Vehicle Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-01 | 2AX-01 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-02 | 2AX-02 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-03 | 2AX-03 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-04 | 2AX-04 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-05 | 2AX-05 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-06 | 2AX-06 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-07 | 2AX-07 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2AX-08 | 2AX-08 | Vehicle Sound Room Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2BX | 2BX | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2BX-02 | 2BX-02 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2BX-04 | 2BX-04 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2BX-06 | 2BX-06 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2BX-08 | 2BX-08 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2EA | 2EA | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2EB | 2EB | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2EC | 2EC | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2ED | 2ED | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2EE | 2EE | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2EW-09 | 2EW-09 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 5XC | 5XC | Vehicle Hi-Bay Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |

[(1)] The fuel may also include biodiesel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.

# Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

**Table Non PSD Cells – 2**

| EP | EU | Opacity | PM (lb/hr) | $PM_{10}$ (lb/hr) | $SO_2$ (lb/MMBtu) | NOx (lb/hr) | CO (lb/hr) | Iowa DNR Construction Permit # |
|---|---|---|---|---|---|---|---|---|
| 1AX02(N) | 1AX02(N) | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-774 |
| 2AX-01 | 2AX-01 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-775 |
| 2AX-02 | 2AX-02 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-776 |
| 2AX-03 | 2AX-03 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-777 |
| 2AX-04 | 2AX-04 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-778 |
| 2AX-05 | 2AX-05 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-779 |
| 2AX-06 | 2AX-06 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-780 |
| 2AX-07 | 2AX-07 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-781 |
| 2AX-08 | 2AX-08 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-782 |
| 2BX | 2BX | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-783 |
| 2BX-02 | 2BX-02 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-784 |
| 2BX-04 | 2BX-04 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-785 |
| 2BX-06 | 2BX-06 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-786 |
| 2BX-08 | 2BX-08 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-787 |
| 2EA | 2EA | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-788 |
| 2EB | 2EB | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-789 |
| 2EC | 2EC | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-790 |
| 2ED | 2ED | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-791 |
| 2EE | 2EE | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-792 |
| 2EW-09 | 2EW-09 | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-795 |
| 5XC | 5XC | 40% (1) | 0.16 (2) | 0.16 (2) | 2.5 | 3.73 (2) | 0.89 (2) | 04-A-793 |

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

(2) Standard is expressed as the average of 3 runs.

**Table Non PSD Cells - 3**

| Pollutant | Emission Limit(s) | Authority for Requirement |
|---|---|---|
| Opacity | 40% | 567 IAC 23.3(2)"d" and the Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 2. |
| PM | 0.16 lb/hr | Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 2. |
| $PM_{10}$ | 0.16 lb/hr | Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 2. |
| $SO_2$ | 2.5 lb/MMBtu | 567 IAC 23.3(3)"b" and the Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 2. |
| NOx | 3.73 lb/hr | Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 2. |
| CO | 0.89 lb/hr | Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 2. |

**Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

Operating Limits:

1. The units are limited to firing on the following fuels: diesel fuel, biodiesel fuel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.
2. The sulfur content of No. 1 and No. 2 fuel oil used shall not exceed 0.5% (by weight).
3. The sulfur content of all other fuels used shall not exceed 0.8% (by weight).
4. The total diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) shall not exceed 2,500,000 gallons per year.

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The type of fuel and its respective sulfur content (in wt%).
2. During the first twelve (12) months of operation determine the total amount of diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) for each month of operation.
3. After the first twelve (12) months of operation determine the annual amount of diesel fuel used by the facility (John Deere Product Engineering Center, Plant No. 07-01-087) on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 04-A-774 through 04-A-793

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

| Table Non PSD Cells – 4 | | | Stack Characteristics | | | | |
|---|---|---|---|---|---|---|---|
| **EP** | **EU** | **Construction Permit #** | **Stack Height (feet, above ground)** | **Discharge Style** | **Stack Opening (inches, dia.)** | **Exhaust Temp. ($^oF$)** | **Exhaust Flowrate (scfm)** |
| 1AX02(N) | 1AX02(N) | 04-A-774 | 13 | Unobstructed Vertical | 8 | 655 | 950 |
| 2AX-01 | 2AX-01 | 04-A-775 | 33 | Unobstructed Vertical | 12 | 655 | 950 |
| 2AX-02 | 2AX-02 | 04-A-776 | 33 | Unobstructed Vertical | 12 | 655 | 950 |
| 2AX-03 | 2AX-03 | 04-A-777 | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AX-04 | 2AX-04 | 04-A-778 | 33 | Unobstructed Vertical | 8 | 655 | 950 |
| 2AX-05 | 2AX-05 | 04-A-779 | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AX-06 | 2AX-06 | 04-A-780 | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AX-07 | 2AX-07 | 04-A-781 | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2AX-08 | 2AX-08 | 04-A-782 | 33 | Unobstructed Vertical | 14 | 655 | 950 |
| 2BX | 2BX | 04-A-783 | 32 | Unobstructed Vertical | 12 | 655 | 950 |
| 2BX-02 | 2BX-02 | 04-A-784 | 33 | Unobstructed Vertical | 8 | 655 | 950 |
| 2BX-04 | 2BX-04 | 04-A-785 | 33 | Unobstructed Vertical | 16 | 655 | 950 |
| 2BX-06 | 2BX-06 | 04-A-786 | 33 | Unobstructed Vertical | 12 | 655 | 950 |
| 2BX-08 | 2BX-08 | 04-A-787 | 33 | Unobstructed Vertical | 12 | 655 | 950 |
| 2EA | 2EA | 04-A-788 | 28.6 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EB | 2EB | 04-A-789 | 27.79 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EC | 2EC | 04-A-790 | 28.6 | Unobstructed Vertical | 6 | 655 | 950 |
| 2ED | 2ED | 04-A-791 | 28.6 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EE | 2EE | 04-A-792 | 33 | Unobstructed Vertical | 6 | 655 | 950 |
| 2EW-09 | 2EW-09 | 04-A-795 | 33 | Unobstructed Vertical | 12 | 655 | 950 |
| 5XC | 5XC | 04-A-793 | 44 | Unobstructed Vertical | 18 | 655 | 950 |

Authority for Requirement: Iowa DNR Construction Permits Referenced in Table Non PSD Cells - 4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: Non Permitted Test Cells

Associated Equipment

**Table Non Permitted Cells – 1**
(Note: The following non-permitted cells were built, modified, reconstructed or altered prior to September 23, 1970 and no construction permits are required at this time.)

| EP | EU | EU Description | Raw Material/ Fuel | Rated Capacity |
|---|---|---|---|---|
| 1AX01 | 1AX01 | Vehicle Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-03 | 2A-03 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-04 | 2A-04 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-05 | 2A-05 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-06 | 2A-06 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-07 | 2A-07 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-08 | 2A-08 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-09 | 2A-09 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2A-10 | 2A-10 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2B-02 | 2B-02 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2B-03 | 2B-03 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2B-04 | 2B-04 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2B-05 | 2B-05 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2C-02 | 2C-02 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2C-03 | 2C-03 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2C-04 | 2C-04 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2C-05 | 2C-05 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2C-06 | 2C-06 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2C-08 | 2C-08 | Transmission Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-02 | 2N-02 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-03 | 2N-03 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-04 | 2N-04 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-05 | 2N-05 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-07 | 2N-07 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-08a [(2)] | 2N-08 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-08b [(2)] | | | | |
| 2N-10a [(3)] | 2N-10 | Diesel Engine Test Cell | Diesel [(1)] | 24.5 gal/hr, 1,000 hp |
| 2N-10b [(3)] | | | | |
| 2N-10c [(3)] | | | | |
| 2N-10d [(3)] | | | | |

[(1)] The fuel may also include biodiesel, E-diesel, aviation or jet fuels, kerosene, natural gas, propane/LPG, gasoline, and hydrogen.
[(2)] All the emission points for this unit will be used at a time.
[(3)] Only one of the emission points for this unit can be used at a time.

# Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

**Table Non Permitted Cells - 2**

| EP | EU | Opacity | PM (gr/dscf) | $SO_2$ | |
|---|---|---|---|---|---|
| | | | | (lb/MMBtu) | (ppmv) |
| 1AX01 | 1AX01 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-03 | 2A-03 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-04 | 2A-04 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-05 | 2A-05 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-06 | 2A-06 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-07 | 2A-07 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-08 | 2A-08 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-09 | 2A-09 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2A-10 | 2A-10 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2B-02 | 2B-02 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2B-03 | 2B-03 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2B-04 | 2B-04 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2B-05 | 2B-05 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2C-02 | 2C-02 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2C-03 | 2C-03 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2C-04 | 2C-04 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2C-05 | 2C-05 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2C-06 | 2C-06 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2C-08 | 2C-08 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-02 | 2N-02 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-03 | 2N-03 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-04 | 2N-04 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-05 | 2N-05 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-07 | 2N-07 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-08a | 2N-08 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-08b | | 40% | 0.1 | | 500 (2) |
| 2N-10a | 2N-10 | 40% | 0.1 | 2.5 (1) | 500 (2) |
| 2N-10b | | 40% | 0.1 | | 500 (2) |
| 2N-10c | | 40% | 0.1 | | 500 (2) |
| 2N-10d | | 40% | 0.1 | | 500 (2) |

(1) This limit is for burning liquid fuel.

(2) This limit is for burning natural gas and other gaseous fuel.

**Table Non Permitted Cells - 3**

| Pollutant | Emission Limit(s) | Authority for Requirement |
|---|---|---|
| Opacity | 40% | 567 IAC 23.3(2)"d". |
| PM | 0.1 gr/dscf | 567 IAC 23.3(2)"a". |
| $SO_2$ | 2.5 lb/MMBtu | 567 IAC 23.3(3)"b". |
| $SO_2$ | 500 ppmv | 567 IAC 23.3(3)"e". |

**Operational Limits & Requirements**

*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

Operating Limits:

1. The sulfur content of No. 1 and No. 2 fuel oil used shall not exceed 0.5% (by weight).

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The type of fuel and its respective sulfur content (in wt%).

Authority for Requirement: 567 IAC 22.108(4)

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: 2EWME1 and 2EWME2

Associated Equipment

**Table Mist-1**

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity | CE ID & Description |
|---|---|---|---|---|---|
| 2EWME1 | 2EWME1 (1) | Oil Mist Eliminator | Oil Mist | 454 lb/yr | 2EWME1 Oil Mist Eliminator |
| 2EWME2 | 2EWME2 (2) | Oil Mist Eliminator | Oil Mist | 454 lb/yr | 2EWME2 Oil Mist Eliminator |

(1) Construction permit 97-A-790-S2 specifies that this unit connects to test cells EU 2EW-09 through 2EW-16.

(2) Construction permit 97-A-791-S2 specifies that this unit connects to test cells EU 2EA, 2EB, 2EC, 2ED, and 2EW-01 through 2EW-08.

## Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

**Table Mist-2**

| EPs | Opacity | PM (gr/dscf) | Iowa DNR Construction Permits |
|---|---|---|---|
| 2EWME1 | 40% (1) | 0.1 | 97-A-790-S2 |
| 2EWME2 | 40% (1) | 0.1 | 97-A-791-S2 |

(1) An exceedance of the indicator opacity of (25%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

**Table Mist-3**

| Pollutants | Emission Limits | Authority for Requirement |
|---|---|---|
| Opacity | 40% | 567 IAC 23.3(2)"d" and Iowa DNR Construction Permits Referenced in Table Mist-2. |
| PM | 0.1 gr/dscf | 567 IAC 23.3(2)"a" and Iowa DNR Construction Permits Referenced in Table Mist-2. |

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Operating Limits:

1. No more than eight engine test cells (that vent through mist eliminator 2EWME1) may be operated at any one time.
2. No more than twelve engine test cells (that vent through mist eliminator 2EWME2) may be operated at any one time.

Authority for Requirement: Iowa DNR Construction Permits 97-A-790-S2 and 97-A-791-S2

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

**Table Mist-4**

| Emission Point | Stack Height (feet, from ground) | Stack Opening (dia, inches) | Discharge Style | Exhaust Temperature ($^{o}$F): | Exhaust Flowrate (scfm) | Iowa DNR Construction Permits |
|---|---|---|---|---|---|---|
| 2EWME1 | 34 | 9 | Vertical | Ambient | 1,000 | 97-A-790-S2 |
| 2EWME2 | 34 | 9 | Vertical | Ambient | 1,000 | 97-A-791-S2 |

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this*

*facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: 2NX6

Associated Equipment

Associated Emission Unit ID Number: 2NX6, 2NX6-FO

Emission Unit vented through this Emission Point: 2NX6
Emission Unit Description: Boiler – Wind Tunnel (Natural Gas)
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.0025 MMcf/hr

Emission Unit vented through this Emission Point: 2NX6-FO
Emission Unit Description: Boiler – Wind Tunnel (Fuel Oil)
Raw Material/Fuel: Fuel Oil
Rated Capacity: 20 gallons/hr

## Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity
Emission Limit: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: PM
Emission Limit: 0.6 lb/MMBtu
Authority for Requirement: 567 IAC 23.3(2)"b"

Pollutant: $SO_2$
Emission Limit: 2.5 lb/MMBtu while firing fuel oil
Authority for Requirement: 567 IAC 23.3(3)"b"

Pollutant: $SO_2$
Emission Limit: 500 ppmv while firing natural gas
Authority for Requirement: 567 IAC 23.3(3)"e"

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

No person shall allow, cause or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

Authority for Requirement: 567 IAC 23.3(3)"b"(1)

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

The facility shall monitor the percent of sulfur by weight in the fuel oil as delivered. The documentation may be vendor supplied or facility generated.

Authority for Requirement: 567 IAC 22.108(3)

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?** **Yes** ☐ **No** ☒

**Facility Maintained Operation & Maintenance Plan Required?** **Yes** ☐ **No** ☒

**Compliance Assurance Monitoring (CAM) Plan Required?** **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: 3a, 3b, and 3c

Associated Equipment

**Table Boiler-1**

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---|---|---|---|---|
| 3a | 3a | Boiler 15 (Natural Gas) | Natural Gas | 14.645 MMBtu/hr |
| | 3a-FO | Boiler 15 (Fuel Oil) | No.2 Fuel Oil | 104.5 gallons/hr |
| 3b | 3b | Boiler 16 (Natural Gas) | Natural Gas | 14.645 MMBtu/hr |
| | 3b-FO | Boiler 16 (Fuel Oil) | No.2 Fuel Oil | 104.5 gallons/hr |
| 3c | 3c | Boiler 17 (Natural Gas) | Natural Gas | 14.645 MMBtu/hr |
| | 3c-FO | Boiler 17 (Fuel Oil) | No.2 Fuel Oil | 104.5 gallons/hr |

## Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from these emission points shall not exceed the levels specified below.*

**Table Boiler-2**

| EPs | Opacity | PM | | $PM_{10}$ | $SO_2$ | | $NO_X$ | Iowa DNR Construction Permits |
|---|---|---|---|---|---|---|---|---|
| | | lb/hr | lb/MMBtu | lb/hr | lb/MMBtu | ppmv | lb/hr | |
| 3a | 40% (1) | 0.41 (2) | 0.6 | 0.41 (2) | 2.5 (3) | 500 (4) | 3.49 (2) | 91-A-171-S1 |
| 3b | 40% (1) | 0.41 (2) | 0.6 | 0.41 (2) | 2.5 (3) | 500 (4) | 3.49 (2) | 91-A-172-S2 |
| 3c | 40% (1) | 0.41 (2) | 0.6 | 0.41 (2) | 2.5 (3) | 500 (4) | 3.49 (2) | 94-A-188-S1 |

(1) Per DNR Air Quality Policy 3-b-08, Opacity Limits, if visible emissions are observed other than startup, shutdown, or malfunction a stack test may be required to demonstrate compliance with the particulate standard. An exceedence of the indicator opacity will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. The permit holder shall also file an "indicator opacity exceedence report" with the DNR field office and keep records as required in the policy. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

(2) Standard is expressed as the average of 3 urns.

(3) For firing on fuel oil.

(4) For firing on natural gas.

**Table Boiler-3**

| Pollutant | Emission Limits(s) | Authority for Requirement |
|---|---|---|
| Opacity | 40% | 567 IAC 23.3(2)"d" and the Iowa DNR construction permits referenced in Table Boiler-2. |
| PM | 0.41 lb/hr | Iowa DNR construction the permits referenced in Table Boiler-2. |
| PM | 0.6 lb/MMBtu | 567 IAC 23.3(2)"b" and the Iowa DNR construction permits referenced in Table Boiler-2. |
| $PM_{10}$ | 0.41 lb/hr | Iowa DNR construction permits referenced in Table Boiler-2. |
| $SO_2$ | 2.5 lb/MMBtu | 567 IAC 23.3(3)"b" and the Iowa DNR construction permits referenced in Table Boiler-2. |
| $SO_2$ | 500 ppmv | 567 IAC 23.3(3)"e" and the Iowa DNR construction permits referenced in Table Boiler-2. |
| NOx | 3.49 lb/hr | Iowa DNR construction the permits referenced in Table Boiler-2. |

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

NSPS Subpart Dc Requirements:

These emission units are subject to Subpart A (General Provisions) and Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) of the New Source Performance Standards (NSPS). The specific requirements are included in the following Process Throughput and Reporting & Recordkeeping sections. These sections include the alternative (i.e., reduced) recordkeeping and reporting requirements allowed by EPA Region VII. Failure to specifically include all of the requirements of the NSPS in this permit does not relieve the owner or operator of those requirements.

Authority for Requirement: 40 CFR 60.40c
567 IAC 23.1(2)"lll"
Iowa DNR Construction Permits 91-A-171-S1, 91-A-172-S2, and 94-A-188-S1

Process throughput:

1. The fuel shall be limited to natural gas, Fuel Oil #1 or Fuel Oil #2.
2. The sulfur content of the fuel oil shall not exceed 0.5% by weight.
3. The quantity of fuel oil used in each of the three boilers shall not exceed 173,250 gallons per 12-month rolling total.

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S1, 91-A-172-S2 and 94-A-188-S1

Reporting & Record keeping:

*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. The facility shall record the type and amount of fuel combusted in the boiler on a monthly basis. Documentation may be in the form of fuel bills or meter readings, or other records that adequately document fuel usage.
2. The facility shall record the sulfur content of any diesel fuel oil #2 combusted in the boilers. The sulfur content shall be determined based on fuel supplier certification. The certification shall include the information required under 40 CFR 60.48c(f)(1).
3. The facility shall submit a copy of all excess emission reports required for Subpart Dc. Per the reduced recordkeeping for Subpart Dc the facility may report excess emissions (or lack thereof) on an annual frequency if only natural gas is combusted in the boilers. Should either of these sources fire any diesel fuel oil #2 during a quarter, whether as an emergency or backup fuel or not, it will be considered subject to the sulfur dioxide emission limitations and required to provide a quarterly compliance report. It should be noted that, per permit Condition 7 of the Iowa DNR Construction Permits 91-A-171-S1, 91-A-172-S2 and 94-A-188-S1, the facility is also required to orally notify the DNR field office of excess emissions within 8 hours and submit a written report within 7 days.

Authority for Requirement: Iowa DNR Construction Permits 91-A-171-S1, 91-A-172-S2 and 94-A-188-S1

**Emission Point Characteristics**

*These emission points shall conform to the specifications listed below.*

**Table Boiler-4**

| Emission Point | Stack Height (feet, from ground) | Discharge Style | Stack Size (in., dia.) | Exhaust Temperature ($^{o}$F): | Exhaust Flowrate (scfm) | Iowa DNR Construction Permits |
|---|---|---|---|---|---|---|
| 3a | 52 | Vertical Obstructed | 32 | 320 | 2,919 | 91-A-171-S1 |
| 3b | 52 | Vertical Obstructed | 20 | 320 | 2,919 | 91-A-172-S2 |
| 3c | 52 | Vertical Obstructed | 20 | 320 | 2,919 | 94-A-188-S1 |

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Authority for Requirement: Iowa DNR Construction Permits referenced in Table Boiler-4.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: 5a

Associated Equipment

Associated Emission Unit ID Number: 5a
Associated Control Equipment ID Number: 5a
Associated Control Equipment Description: Cyclone

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Emission Unit vented through this Emission Point: 5a
Emission Unit Description: Pattern Shop Power Tools
Raw Material/Fuel: Wood
Rated Capacity: 160 $ft^3$/hr

## Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
*The emissions from these emission points shall not exceed the levels specified below.*

Pollutant: Opacity
Emission Limit: 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d" (Iowa DNR Construction Permit 04-A-794)

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM
Emission Limit: 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a" (Iowa DNR Construction Permit 04-A-794)

Pollutant: $PM_{10}$
Emission Limit: 1.7 lb/hr expressed as the average of 3 runs
Authority for Requirement: Iowa DNR Construction Permit 04-A-794

**Emission Point Characteristics**

*This emission point and cyclone is connected to the following emission units:*

| Emission Unit Description | Maximum rated capacity ($ft^3$/hr) |
|---|---|
| Double Disk Sander | 160 |
| Spindle Sander | 160 |
| Single Disk Sander | 160 |
| Band Saw (2) | 160 (each) |
| Radial Arm Saw | 160 |
| Table Saw | 160 |
| Jointer | 160 |
| Thickness Planer | 160 |
| Drill Press | 160 |
| Floor Pick-up (2) | 160 (each) |
| Drop Vacuum Hoses (7) | 160 (each) |

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 16
Discharge Style: Unobstructed Vertical
Stack Opening, (inches, dia.): 32
Exhaust Temperature (°F): 70
Exhaust Flow Rate (scfm): 2,000

Authority for Requirement: Iowa DNR Construction Permit 04-A-794

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Stack Testing:**

Pollutant – Opacity [(1)]
Stack Test to be completed within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.
Test Method - 40 CFR 60, Appendix A, Method 9
Test Run Time – 1 hour
Authority for Requirement - Iowa DNR Construction Permit 04-A-794

[(1)] Testing is required on this emission point if the units associated with it operate more than 16 hours per week.

Pollutant – PM [(1)]
Stack Test to be completed within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.
Test Method - Iowa Compliance Sampling Manual Method 5
Test Run Time – 1 hour
Authority for Requirement - Iowa DNR Construction Permit 04-A-794
[(1)] Testing is required on this emission point if the units associated with it operate more than 16 hours per week.

Pollutant – $PM_{10}$[(1)]
Stack Test to be completed within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment.
Test Method - 40 CFR 51, Appendix M, 201A with 202
Test Run Time – 1 hour
Authority for Requirement - Iowa DNR Construction Permit 04-A-794
[(1)] Testing is required on this emission point if the units associated with it operate more than 16 hours per week.

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

**Monitoring Requirements**
*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

Reporting & Record keeping:
*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

The weekly hours of operation for the emission units associated with this emission point.

Authority for Requirement: Iowa DNR Construction Permits 04-A-794

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: 5N

Associated Equipment

Associated Emission Unit ID Number: 5N
Associated Control Equipment ID Number: 5N
Associated Control Equipment Description: Dry Filter

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Emission Unit vented through this Emission Point: 5N
Emission Unit Description: Paint Booth
Raw Material/Fuel: Paint
Rated Capacity: 4.7 lb/hr

## Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
*The emissions from these emission points shall not exceed the levels specified below.*

Pollutant: Opacity
Emission Limit: 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: PM
Emission Limit: 0.01 gr/scf
Authority for Requirement: 567 IAC 23.4(13) (Iowa DNR Construction Permit 80-A-008)

**Monitoring Requirements**
*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## Emission Point ID Number: T1, T2, and T3

Associated Equipment

**Table Tank-1**

| EP | EU | Emission Unit Description | Raw Material | Rated Capacity |
|---|---|---|---|---|
| T1 | T1 | Diesel Tank 1 | Diesel Fuel | 20,000 gallons |
| T2 | T2 | Diesel Tank 2 | Diesel Fuel | 20,000 gallons |
| T3 | T3 | Diesel Tank 3 | Diesel Fuel | 20,000 gallons |

## Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
*The emissions from these emission points shall not exceed the levels specified below.*

There are no emission limits at this time.

**Operational Limits & Requirements**
*The owner/operator of these equipment shall comply with the operational limits and requirements listed below.*

Reporting & Record keeping:
*The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:*

1. A Material Safety Data Sheet (MSDS) for any material stored in the tanks.
2. Determine the annual throughput of material for each tank on a rolling-12-month basis for each month of operation.

Authority for Requirement: Iowa DNR Construction Permits 99-A-793, 99-A-794 and 99-A-795

**Emission Point Characteristics**
*These emission points shall conform to the specifications listed below.*

**Table Tank-2**

| Emission Point | Stack Height (feet, from ground) | Discharge Style | Stack Size (in., dia.) | Exhaust Temperature ($^{o}$F): | Exhaust Flowrate (scfm) | Iowa DNR Construction Permits |
|---|---|---|---|---|---|---|
| T1 | 25 | Downward | 4 | 70 | 0 | 99-A-793 |
| T2 | 25 | Downward | 4 | 70 | 0 | 99-A-794 |
| T3 | 25 | Downward | 4 | 70 | 0 | 99-A-795 |

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the

emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒**

**Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒**

Authority for Requirement: 567 IAC 22.108(3)

# IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

**G1. Duty to Comply**

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (3)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

**G2. Permit Expiration**

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(3)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(3). *567 IAC 22.105*

**G3. Certification Requirement for Title V Related Documents**

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

**G4. Annual Compliance Certification**

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the

compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

**G5. Semi-Annual Monitoring Report**

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

**G6. Annual Fee**

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
    a. Form 1.0 "Facility Identification";
    b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
    c. Form 5.0 "Title V annual emissions summary/fee"; and
    d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
    a. Form 1.0 "Facility Identification";
    b. Form 5.0 "Title V annual emissions summary/fee";
    c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

**G7. Inspection of Premises, Records, Equipment, Methods and Discharges**

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

**G8. Duty to Provide Information**

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

**G9. General Maintenance and Repair Duties**

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

**G10. Recordkeeping Requirements for Compliance Monitoring**

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
    a. The date, place and time of sampling or measurements
    b. The date the analyses were performed.
    c. The company or entity that performed the analyses.
    d. The analytical techniques or methods used.
    e. The results of such analyses; and
    f. The operating conditions as existing at the time of sampling or measurement.
    g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

a. Comply with all terms and conditions of this permit specific to each alternative scenario.

b. Maintain a log at the permitted facility of the scenario under which it is operating.

c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

**G11. Evidence used in establishing that a violation has or is occurring.**

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;

b. Compliance test methods specified in 567 Chapter 25; or

c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

a. Any monitoring or testing methods provided in these rules; or

b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(3)*

**G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

**G13. Hazardous Release**

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(3). *567 IAC Chapter 131-State Only*

**G14. Excess Emissions and Excess Emissions Reporting Requirements**

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a

violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
ii. The estimated quantity of the excess emission.
iii. The time and expected duration of the excess emission.
iv. The cause of the excess emission.
v. The steps being taken to remedy the excess emission.
vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
ii. The estimated quantity of the excess emission.
iii. The time and duration of the excess emission.
iv. The cause of the excess emission.
v. The steps that were taken to remedy and to prevent the recurrence of the

incident of excess emission.

vi. The steps that were taken to limit the excess emission.

vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The facility at the time was being properly operated;

c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and

d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

**G15. Permit Deviation Reporting Requirements**

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

**G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations**

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(3) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(3), 567 IAC 23.1(3), 567 IAC 23.1(4)*

**G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification**

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under

section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
d. The changes are not subject to any requirement under Title IV of the Act.
e. The changes comply with all applicable requirements.
f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:

i. A brief description of the change within the permitted facility,
ii. The date on which the change will occur,
iii. Any change in emission as a result of that change,
iv. The pollutants emitted subject to the emissions trade
v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
vii. Any permit term or condition no longer applicable as a result of the change. *567 IAC 22.110(1)*

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(3)*
3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

**G18. Duty to Modify a Title V Permit**

1. Administrative Amendment.

a. An administrative permit amendment is a permit revision that is required to do any of the following:

i. Correct typographical errors
ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the

source;

iii. Require more frequent monitoring or reporting by the permittee; or

iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

i. Do not violate any applicable requirements

ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.

iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.

iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;

v. Are not modifications under any provision of Title I of the Act; and

vi. Are not required to be processed as significant modification.

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.

ii. The permittee's suggested draft permit

iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee

need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

**G19. Duty to Obtain Construction Permits**

Unless exempted under 567 IAC 22.1(3), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

**G20. Asbestos**

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when conducting any renovation or demolition activities at the facility. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

**G21. Open Burning**

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 <u>except</u> 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only*

**G22. Acid Rain (Title IV) Emissions Allowances**

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

**G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements**

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.

b. The placement of the required warning statement must comply with the requirements

pursuant to § 82.108.

c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,

5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

**G24. Permit Reopenings**

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.

c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(3)*

**G25. Permit Shield**

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. 567 *IAC 22.108 (18)*

**G26. Severability**

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

**G27. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

**G28. Transferability**

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

**G29. Disclaimer**

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

**G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification**

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.
*567 IAC 25.1(7)"a", 567 IAC 25.1(9)*

**G31. Prevention of Air Pollution Emergency Episodes**

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.
*567 IAC 26.1(1)*

**G32. Contacts List**

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

**Field Office 1**
909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

**Field Office 2**
P.O. Box 1443
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

**Field Office 3**
1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

**Field Office 4**
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

**Field Office 5**
401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

**Field Office 6**
1023 West Madison Street
Washington, Iowa 52353-1623
(319) 653-2135

**Polk County Public Works Dept.**
Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

**Linn County Public Health Dept.**
Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

# V. Appendix: DNR Air Quality Policy 3-b-08 (Opacity Limits)

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

POLICY/PROCEDURE STATEMENT

**TOPIC:** Opacity Limits

**Policy Procedure Number:** 3-b-08 **Replaces Number: None**

**Date:** **Effective Date:** November 12, 1998

**Preparer: David Phelps** **Reviewer:**

**Approval:** **Bureau Chief: Peter Hamlin** **Date:** 11/12/98

**Division Administrator: Allan Stokes** **Date:** 11/12/98

**Applicable Code of Iowa or Iowa Administrative Code Rule: 23.3(2)d**

**"No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567-Chapter 24."**

## REASON OR BACKGROUND

The default opacity limit allowed by regulation is 40%. This limit was established with the original regulations in 1970. It is generally accepted that opacity greater than 40% was evidence of a mass emission standard exceedence. More recently, there have been requests from facilities for limits much lower than that allowed by the regulations, in some cases less than 0.01 gr/scf to which a 40% opacity limit does not correspond. Since opacity is used as an indicator of the particulate emission rate, listing an indicated potential problem opacity that is more in line with the mass emission rate is useful. In order to have the authority to set limits lower than 40%, subrule 23.3(2)d was changed. This change allows the department the ability to set opacity limits at a level that more closely corresponds to what would be observed by the source when operating in compliance with its mass emission rate.

Except in the case where a specific opacity limit is established by rule, it has been the general policy of the Department not to take action on opacity limits directly. Rather, if it is felt that a violation of the mass emission rate exists that is not attributable to some abnormal event, a stack test would be required to verify compliance. However, the Department reserves the right to use the results of formal opacity readings as evidence of an exceedence.

# DETAILS

It shall be the policy of the Department to list the default opacity as a permit condition and in addition an indicator opacity may be listed.

For ease of proving continual compliance a source may request a 'no visible emissions' opacity limit which allows proof of compliance without having a certified opacity reading taken. In this case any visible emissions would be an exceedence.

The IDNR permit writer may list an opacity that will be a indicator of possible mass emission rate exceedence. If the permitee wishes, the recommended indicator opacity may be changed by demonstrating compliance with the mass emission rate during a stack test while emitting the new desired indicator opacity. If the tested mass emission rate is less than the permitted emission rate, then the desired indicator opacity may be set at a proportionally higher level than observed during the stack test.

If an opacity measurement, taken in accordance with an approved reference method for opacity, (generally USEPA Method 9 or 22) exceeds the indicator opacity then the facility will promptly investigate the source and make corrections. However, if after corrections are made the opacity continues to exceed the indicator opacity the Department may require additional proof to demonstrate compliance with the mass emissions limits.

## Recommended indicator opacities shall be:

| Grain Loading gr./scf | Recommended Indicator Opacity |
|---|---|
| <0.01 gr./scf | non specified in permit * |
| 0.01 to 0.06 gr./scf | 10% Opacity |
| 0.061 to 0.08 gr./scf | 20% Opacity |
| 0.081 to 0.1 gr./scf | 25% Opacity |

* A line is added to the permit that states: "If visible emissions are observed other that start-up, shut-down, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard."

If a source is a batch process the indicator opacity shall be based on the table above, but the opacity averaging period, for comparison to the indicator opacity, shall be the entire batch cycle. For purposes of comparison to the indicator opacity readings shall be taken during the entire cycle and averaged.

Sources are also given the opportunity to set source specific limits to be coordinated with the initial compliance test. These may then be incorporated into the permit.

In all cases an exceedence of the indicator opacity will require the permitee to file an "indicator opacity exceedence report" to the IDNR regional office. The reporting requirements shall be:

*Oral report of excess indicator opacity.* An incident of excess indicator opacity (other than an incident of excess indicator opacity during a period of startup, shutdown, or cleaning) shall be reported to the appropriate regional office of the department within eight hours of, or at the start of the first working day following the onset of the of the incident. The reporting exemption for an incident of excess indicator opacity during startup and shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in subrule 25.1(6).

An oral report of excess indicator opacity is not required for a source with operational continuous monitoring equipment (as specified in subrule 25.1(1) if the incident of excess indicator opacity continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity.

The oral report may be made in person or by telephone and shall include as a minimum the following:

a) The identity of the equipment or source operation form which the excess indicator opacity originated and the associated stack or emission point.
b) The estimated quantity of the excess indicator opacity.
c) The time and expected duration of the excess indicator opacity.
d) The cause of the excess indicator opacity.
e) The steps being taken to remedy the excess indicator opacity.
f) The steps being taken to limit the excess indicator opacity in the interim period.

*Written report of excess indicator opacity.* A written report of an incident of excess indicator opacity shall be submitted as a follow-up to all required oral reports to the department within seven (7) days of the onset of the upset condition, and shall include as a minimum the following:

a) The identity of the equipment or source operation point from which the excess emission originate and the associated stack or emission point.
b) The estimated quantity of the excess indicator opacity.
c) The time and duration of the excess indicator opacity.
d) The cause of the excess indicator opacity.
e) The steps that were taken to remedy and to prevent the recurrence of the incident of excess indicator opacity.
f) The steps that were taken to limit the excess indicator opacity.
g) If the owner claims that the excess indicator opacity was due to malfunction, documentation to support this claim.

Exceptions to this policy:

1) In the case where a facility has an opacity limit established in an existing permit, no change will be made to that permit limit unless the permit is being modified for other purposes.
2) If the facility has a continuous opacity monitor, this policy shall not apply.
3) This policy shall not apply to opacity limits established in Prevention of Significant Deterioration (PSD) permits or permits that were established for maintenance plans for nonattainment areas.
4) This policy shall not apply where an opacity limit is established as an indication of hazardous air pollutants.

5) This policy shall not apply where an opacity limit is established by a rule, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), etc.